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HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER

POLLACK, MELVIN H

ART UNIT

PAPER NUMBER

2141

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/737,113

Applicant(s)

VENKATESAN, THYAGARAJAN

Examiner

Melvin H Pollack

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 December 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☒ Other: see detailed office action.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Using a Probability Associative Matrix Algorithm to Prefetch and Tailor Web Pages.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3, 6, 15, 17-21, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 3 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the definition and method of modifying the web site. More specifically, the examiner cannot determine if this is a real-time custom tailoring of a web page (i.e. adding elements to a web page that the user might like) or if this is a later modifying of a web site (i.e. editing a web page later that day based on user feedback). The specification does not adequately clarify this issue. As such, the examiner recommends that the claims and/or specification be amended to clarify the time elements of the modification.
5. Claims 18-20 inherit this deficiency.

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6. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term “monitoring electronically” in claims 6 and 21 is not adequately defined in the specification or the claims, while the accepted meaning is unclear, but could mean “an electronic device does the monitoring” or “monitoring is performed by voltage changes” or it could mean something else. The term is indefinite because the specification does not clearly define or redefine the term. Please amend the specification and/or claims to identify and clarify this step.

7. Claims 15 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: the value stored in an M x N slot of the matrix. Further, this is based on the assumption that some of the M columns are separated page shift sequences, some are number of counted occurrences, and some are associated probability. However, the examiner finds it difficult to envision this particular structure and on how to make it work. This is especially the case since such matrices are usually split into three matrices and linked through a database. The examiner requests that the applicant amend the claims and/or specification to clarify the structure of this matrix. The examiner would especially like to see one or more new figures geared toward the layout and usage of the matrix and/or database.

Claim Rejections - 35 USC § 102

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8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 4-16, and 21-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Horvitz (6,182,133).

10. For claim 1, Horvitz teaches a method (abstract) of predicting future web navigation sequences of users visiting a web site (col. 1, lines 10-30; prefetching implies that the system has made a prediction of future pages a user will visit, in order to retrieve them before a user requests them), comprising:

- a. Monitoring web navigation sequences performed by each user while browsing the web site (col. 4, lines 5-20);
- b. Storing the monitored web navigating sequences (col. 4, lines 40-47); and
- c. Analyzing the stored web navigation sequences to predict future user patterns (col. 4, lines 20-26).

11. For claim 4, Horvitz teaches analyzing the stored web navigation sequences further to collect user information (col. 27, line 13 – col. 28, line 22).

12. For claim 5, Horvitz teaches storing the predicted user patterns and the collected user navigating information (col. 41, line 41 – col. 43, line 38) within a database structure of the web site (col. 46, line 40 – col. 48, line 15).

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13. For claim 6, Horvitz teaches that monitoring the web navigation sequences of each user is electronic (Figs. 5, 6 and 8).

14. For claim 7, Horvitz teaches that navigating sequences comprises page shift sequences associated with each of the navigating sequences (col. 24, line 10 – col. 25, line 30; esp. col. 24, lines 50-55).

15. For claim 8, Horvitz teaches that monitoring each of the navigating sequences comprises monitoring page shift sequences associated with web navigation sequences (col. 27, lines 35-45).

16. For claim 9, Horvitz teaches that monitoring page shift sequences comprises monitoring each of the users navigating from a present page shift sequence to a next page shift sequence (col. 27, lines 45-60).

17. For claim 10, Horvitz teaches that the present page shift sequence comprises the user navigating from a previous web page to a present web page (col. 9, lines 20-35).

18. For claim 11, Horvitz teaches that the next page shift sequence comprises the user navigating from the present web page to a next web page (col. 9, lines 45-62).

19. For claim 12, Horvitz teaches that storing the monitored web navigation sequences comprises storing the page shift sequences associated with the web navigation sequences within the database structure of the web site (col. 42, lines 35-45).

20. For claim 13, Horvitz teaches that analyzing the stored web navigation sequences further comprises:

- a. Separating the page shift sequences from the stored page shifts associated with web navigation sequences (col. 42, lines 1-17);

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- b. Counting the number of occurrences of each page shift sequence from the separated page shift sequences (Fig. 14); and
- c. Analyzing the counted number of occurrences to predict the future web site user patterns (col. 42, lines 8-17).

21. For claim 14, Horvitz teaches that analyzing the counted number of occurrences comprises computing a probability of navigating from the present page shift sequence to the next page shift sequence based on using the counted number of occurrences (Fig. 17; col. 41, lines 45-55).

22. For claim 15, Horvitz teaches analyzing the web navigation sequences to predict user patterns comprises using a probability associative matrix algorithm based on a two dimensional matrix including N rows for each stored web navigation sequence and M columns including separated page shift sequences, number of counted occurrences of each of the page shift sequences, and the probability associated with each of the number of counted occurrences to predict future user patterns (col. 43, lines 9-37).

23. Claim 16 is drawn to a hardware system that implements some, but not all, of the method drawn in claim 1. It is well known in the art that a system implementation is functionally equivalent to the underlying method. Therefore, since claim 1 is rejected, claim 16 is also rejected for the reasons above. A teaching that shows the functional equivalence will be included upon request.

24. Claims 21-28 are drawn to a hardware system that implements the method drawn in claims 6, 7, 13, 9-11, 14, and 15, respectively. It is well known in the art that a system implementation is functionally equivalent to the underlying method. Therefore, since claims 6,

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7, 9-11, and 13-15 are rejected, claims 21-28 are also rejected for the reasons above. A teaching that shows the functional equivalence will be included upon request.

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claims 2, 3 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horvitz as applied to claims 1, 16 above, and further in view of Hansen et al. (6,449,604).

27. For claim 2, Horvitz does not expressly disclose providing the analyzed web navigation sequences to a web content manager and a web site administrator, but does teach the storage of said statistics on a web server, as shown above. Hansen teaches a method (see abstract) for summarizing and showing the usage patterns of the web site (col. 1, lines 10-15) to provide to those interested in the information (col. 2, lines 38-41). At the time the invention was made, one of ordinary skill in the art would have recognized the rich collection of data provided by Horvitz, and would have recognized the many uses and needs for higher-level summaries of usage patterns (col. 2, lines 29-31).

28. For claim 3, Horvitz does not expressly disclose modifying the web site by the web administrator and the web content manager based on the analyzed information to enhance the effectiveness of the web site usage by the users. Hansen teaches providing this data to content providers (col. 3, lines 55-60), Web Designers (col. 4, lines 44-45), Web Administrators (col. 4,

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lines 46-48) and the like. Examiner takes Official Notice (see MPEP § 2144.03) that "using usage data to modify the web site" in a computer networking environment was well known in the art at the time the invention was made. Indeed, this is usually the primary purpose of collecting such data. At the time the invention was made, one of ordinary skill in the art would have used Hansen to recognize the importance of navigation data to various users charged with designing and maintaining web sites.

29. The Applicant is entitled to traverse any/all official notice taken in this action according to MPEP § 2144.03. However, MPEP § 2144.03 further states "See also *In re Boon*, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice)." Specifically, *In re Boon*, 169 USPQ 231, 234 states "as we held in *Ahlert*, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. We did not mean to imply by this statement that a bald challenge, with nothing more, would be all that was needed". Further note that 37 CFR § 1.671(c)(3) states "Judicial notice means official notice". Thus, a traversal by the Applicant that is merely "a bald challenge, with nothing more" will be given very little weight.

30. Claims 17-20 are drawn to a hardware system that implements the method drawn in claims 2, 3, 1, 4, and 5, respectively. It is well known in the art that a system implementation is functionally equivalent to the underlying method. Therefore, since claims 1-5 are rejected, claims 17-20 are also rejected for the reasons above. A teaching that shows the functional equivalence will be included upon request.

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Conclusion

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin H Pollack whose telephone number is (703) 305-4641. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on (703) 305-4003. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MHP
24 March 2004


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER